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ARTS AND COGNITION: PERFORMANCE, CRITICISM AND AESTHETICS

Evidence continues to mount for the proposition that the arts are cognitive symbols in important respects. Through the substantial efforts of Susanne Langer, Rudolf Arnheim, Nelson Goodman, and others, current views on the nature of thinking, the variety and functions of cognitive symbols, and the range of cognitive activities have broadened considerably. Langer, for instance, represents the arts as symbols capable of providing a unique knowledge of human feeling.¹ Arnheim has pioneered in showing that visual images, as well as kinesthetic and other nonverbal sensory images of the kinds characteristically found in the arts, are effective means to carry out thinking.² Goodman has proposed that the range of human symbols with cognitive significance extends to all of the arts.³ The objections of positivists and others who argued that the term "cognitive significance" applies only to propositions formulated in a language with a well-determined structure, and with the capability for empirical verification, will no doubt continue to interest some cognitive theorists, causing them to question whether the arts are really cognitive in nature. The debate over whether symbol systems in the arts are languages or language-like is but one aspect of the ongoing discussion of cognition in the arts. For myself, however, the evidence of recent studies in philosophy and cognitive psychology in favor of a cognitive view of the arts is more persuasive.⁴

This paper directs inquiry into the cognitive aspects of art to a

distinction between performance and responses to performances. Performances and responses to them, such as criticism and aesthetic theory, represent important modes of arts-related cognition. The discussion here will be limited to the cognitive aspects of dance performances and to responses in the form of criticism and aesthetic theory.

The distinction between performances and responses draws attention to two different aspects of knowledge as reflected in the German words, *erlebnis* and *erkenntnis*. *Erlebnis*, which is sometimes referred to as knowledge by acquaintance, is knowledge attained in the presence of an object or event. *Erlebnis* is not a vague or contentless gesture at the ineffable. *Erlebnis* is an ordered, intelligible symbolic process through which the producer sends out information and is also the receiver of information about the process itself and the meaning of its symbols.

Erkenntnis is knowledge about something and consists of description and interpretation of an object or event. It is based on observation and reasoning processes such as association, comparison, appeal to prior knowledge, and judgment. Knowledge in the form of *erkenntnis* can, under certain circumstances, act as a "mental" substitute for the object or event.

In the case of art, however, a description or an interpretation seldom, if ever amounts to an exhaustive characterization of the work. It is necessary to supplement *erkenntnis* with *erlebnis* which is supplied by the seeing, hearing, or undergoing, as in the case of performing, in the actual presence of the artwork. Hence both *erkenntnis* and *erlebnis* have a major place in the study of the arts. My intent is not, therefore, to propose that *erkenntnis* and *erlebnis* constitute a dualism of knowledge with respect to the arts. There are in fact elements of both at work in a dance performance and in the responses to it. The dancer brings to performance a substantial knowledge about dance (*erkenntnis*), including a system of formalized training, and at the same time, she/he discovers and discloses to the audience an individualized presence that can only be experienced at a particular moment of performance (*erlebnis*). A critic, responding to the performance receives initial impressions of the performance in the moment of performance, as *erlebnis*, but criticism itself consists of a mixture of initial impressions with analysis, description and interpretation resulting in *erkenntnis*.

In view of the fact that John Hospers once appealed to the very same

distinction between *erlebnis* and *erkenntnis* to deny that art works can provide knowledge of any sort, a brief explanation of our differences is required. Following Morritz Schlick, Hospers argues that *erkenntnis*, but not *erlebnis* is a form of knowledge. Hence, works of art provide only immediate expressive experiences lacking in cognitive significance.⁵ Since no substantial reasons are given for excluding *erlebnis* from knowledge, other than to say that knowledge is about things, while acquaintance is immediate, Hospers' conclusion seems arbitrary and without justification. On the other hand, it is entirely within the historic and philosophic meanings of the terms "knowledge" and "cognition" to include both *erlebnis* and *erkenntnis* as forms of knowledge or cognition. For this reason, and because the recognition of both forms of knowledge will constitute an important step toward ending the banishment of the arts from the realm of cognition, both *erkenntnis* and *erlebnis* are represented here as forms of knowledge.

I. Cognitive Aspects of Dance: Performances

The mental processes that dancers undergo during a performance will be considered primarily with respect to *erlebnis*. First it is necessary to consider ways to approach the inner experiences of the performers. Analyzing dance performances is one approach. This has been attempted in conjunction with the development of systems of notation for analyzing dance. Rudolf Laban's theory of dance notation, and also Godman's discussions of the symbolic nature of dance, are based on structural analysis of dance performances. Another approach is to apply concepts from the existing studies of psychomotor behavior and body movement to the examination of dance performances.⁶ Such approaches omit consideration of factors such as intentions, feelings, and the role of the mind in correlating actions of muscle-tendon-joints, style, and feelings. A third approach is to question performers directly about their experiences. All three approaches were considered for this presentation. Of particular interest were interviews with two ballet dancers and two modern dancers who were asked to describe their own experiences of performing.⁷

A dance performance occurs within an established system of movement with its own rules and conventions for creating dances. Ballet, modern dance, and post-modern dance represent three different genres,

each with many stylistic variations. In order to participate, the performer must undergo training or initiation into a system of movement. Once the system is internalized, the performer is able to join with a choreographer and other dancers in its creative uses. Together, dancers and choreographers produce individual dances that are shared with the members of dance audiences, who must also acquire a certain literacy in dance appreciation in order to participate. Even improvisational dance operates with a set of conventions, for example open form, non-traditional spaces and rejection of tradition.

The principal elements in a performance from the dancer's point of view are the movements and/or instructions prescribed in the choreography. The dancer then draws upon his/her technical skills and expressive powers to execute the movements with the appropriate qualities of shape, line, proportion, feeling or concept. A sense of movement style in accordance with the overall intent of the piece is also required.

Kinesthetic intelligence appears to exercise a dominant role, especially in traditional dance performances. Kinesthetic intelligence is spatial intelligence that developed through muscle action and memory. Psychologists refer to kinesthetic intelligence as the sensory system which controls all bodily movement and orients the moving body in space.⁸ Kinesthetic intelligence provides the dancer with an immediate awareness of the position of the body in space. It also registers the characteristics of movement in all of the different parts—muscles, joints, tendons—throughout the entire body including rate, extent, and duration. Kinesthetic intelligence is thus a key element in enabling the dancer to learn and execute in performances the movements of a dance. Like other aspects of human intelligence, it is a flexible capacity adaptable to any number of different systems for creating dances. Classical ballet is but one of these.

The human mind has a central role in the execution of a dance performance. Mind is the controlling force which coordinates all of the various sources a dancer draws upon to create a performance. These sources include kinesthetic, feelings and ideas, as well as prior training, choreography, and a sense of style. Mind thus harmonizes rhythmic spatial qualities of movement with expressive qualities and abstract ideas to create a sense of unity and order in a performance. A ballet dancer has described the role of the mind in a performance with these words:

The mind is the controlling center. It enables us to be in command of our bodies, to be concentrated, to bring clarity, and to acquire the right feeling that the movement needs.⁹

The knowledge that a dancer receives through performing a dance may include a vivid, individualized awareness of sequences of the work from beginning to end, as well as a grasp of its overall shape. The aims for the work as established by the choreographer are internalized and given shape in the mind and body of the dancer and individuated within the dancer's own artistic persona. The choreographer's aims guide the dancer's efforts to realize the dance in the performance. The mental activity of the dancer includes an awareness of abstract relations of space and time, of scale and proportion, as well as concrete awareness of the movement phrases and body shapes in one part of the dance connecting to those in another part. Accompanying these experiences is a heightened awareness of relationships between various parts of the moving body. Occasionally, a dancer discovers new relationships between movements in various parts of the body while performing a dance. The cognitive experience that a dancer undergoes while producing a dance might be called "thinking in movement." It is somewhat analogous to thinking in painting or in music. Following Merleau-Ponty and others, it can be said that the mental processes that a performer undergoes involves no separation of thinking and doing. The dancer's movements become the very presence of thought. Using improvisational dance as a model, Maxine Sheets-Johnstone has remarked,

To be thinking in movement means that a particular situation is unfolding as it is being created by a mindful body; a kinesthetic intelligence is forging its way in the world, shaping and being shaped by the developing pattern surrounding it.¹⁰

While I do not share Sheets' view that improvisational dancing is entirely independent of a symbol system, or that such dancing is essentially free from prior thoughts experienced independently of the moment of creation, Sheets-Johnstone's description of "thinking in movement" in improvisational dancing corresponds very nicely to the notion of *erleben* described here. Her description suggests that dance performances provide individualized, yet orderly knowledge be obtainable solely in the

presence of improvisational dance works. However, other types of dance including classical ballet, and modern dance (for example Martha Graham) also provide experiences of *erlebnis* prior to thought or feeling of movement.

Perhaps this explanation of *erlebnis* aspects of dance performances can be strengthened by reference to a photograph. The photograph is Barbara Morgan's portrayal of Martha Graham in *Lamentation*, 1935.¹¹ From the spectator's angle, the photograph expresses grief or anguish. These particular qualities are exemplified by means of sharp lines and angular body shapes, and by the contrasting of dark and light areas of the picture. Rhythmic movements, suggesting kinesthetic action, are accented by parallel diagonal lines of a sack dress stretched across the dancer's body and by the upward thrust of the dancer's head, outstretched arms, and knees. Metaphorically speaking, the photograph portrays in its parallel visual form the kinesthetic and expressive features of the dancer's experience during a performance.

This brief overview suggests the conclusion that performing a dance represents a complex set of cognitive operations requiring attention to several different domains. *Erlebnis* requires that we consider kinesthetic processes, feelings, and ideals, all in relation to movement. While *erlebnis* appears to be the primary feature of knowledge considered from the point of view of the performer, a performance can also function to represent ideas and feelings to others. Hence, when dance movements tell an edifying story, or imitate the movements of the planets, for example, the dance approaches *erkenntnis*. But this does not seem to be its primary function. And *erkenntnis* is not the primary concern of the dancer. Because the producer in a performance is also the receiver of the knowledge given in the performance, he/she is in a unique position with respect to knowledge. As the producer, the dancer experiences the discoveries that unfold during the creative process; as the receiver, he/she also shares with the audience the outcome of the performance through reflecting on it. Hence, the dancer experiences the performance at the levels of both *erlebnis* and *erkenntnis*.

II. Responses to Performance

While a dancer's knowledge may include what has been discovered during the creative process and also the results, there are apparent dif-

ferences between the knowledge experienced directly by the producer and knowledge as it appears in criticism and aesthetic theory. The critic's and the aesthetician's knowledge, for example, does not depend entirely upon the actual presence of the work. Criticism and aesthetics can be written and read without one's being simultaneously in the immediate presence of the performance, whereas the knowledge that the performer has is available only in the actual dancing. It is thus necessary to elaborate upon the characteristics of knowledge as it appears in criticism and aesthetic theory in the text that follows.

An expanded version of this section of my paper might include first hand responses of spectators to performances, as well as responses of critics, dance historians, art theorists, and philosophers. Here it is only possible to argue briefly that all such responses to a performance extend the cognitive significance of performances. All of these "secondary" responses to dance mainly consist of forms of *erkenntnis* or knowledge about the work. The spectator's first hand experience is perhaps the most heavily imbued with *erlebnis*, but he/she brings theories and beliefs which are forms of *erkenntnis*. For example, a critic writes about unique ideas, movement shapes and patterns and expressive qualities found in a particular performance. The critic's experience too begins with *erlebnis* qualities of the dance work acquired from watching the dance. A dance historian, however, considers an individual dance work in relation to its historic and cultural contexts, and not always with the benefit of direct observation of performance. On a more abstract level, aesthetic theory offers a philosophical framework for discussing the framework of dance, and seeks to improve our thinking about the dance as one among other art media.

A. Criticism

In contract to performance, criticism occurs in the medium of a verbal language within the limits of its own more or less individual and institutionalized practices. An overall aim of criticism is to improve our knowledge of performances. A performance acts as a stimulus pattern for a critic and provides a complex visual image for the critic's responses. Criticism itself consists primarily of descriptions, interpretations, and evaluations of performances. Critics may also write about other aspects of dance including characteristics of a performer's style, more general discussions of a dance company, and the overall scope of a choreographer's work.

Of what does the critic's description of a performance consist? It is based on the impressions received as the performance presents itself to the senses, how it looks and feels. Some, but not all, of the properties that appear in a critic's description are available to direct observation. For example, the shapes and the movement of a physical body in motion, including the properties of speed, duration, and intensity, are readily observable. The types of costumes, lighting, set design, and the music, as well as the patterns of movement, are similarly observable. Kinesthetic and expressive qualities, and the ideas, all of which give artistic significance to physical movement, however, are registered in the mind and body of the critic without being susceptible to direct observation the usual sense of visual or auditory confirmation. These qualities are nonetheless essential to the description of the performance as a work of art. Other more complex qualities emerge from the simultaneous presence of the kinesthetic, expressive, and formal properties interacting to create an overall sense of style in the performance. A critic's description of a performance, therefore, records the holistic, emergent properties that define the work as a whole, as well as the qualities of its separate parts. Sensitive observation skills and creative uses of language are required to present these more intangible aspects of a performance.

Interpretation and evaluation, unlike description, call upon the critic to develop his own thoughts in response to the performance. Interpretation allows the critic to say, in general, what the piece was about and to give suggestion as to its overall meaning. Frequently, interpretation will relate the happenings in a performance to a framework of ideas or beliefs existing outside the piece. A critic might, for instance, refer the viewers of Doris Humphries' "The Shakers" to the beliefs and practices of the nineteenth century Biblical religious group known as Shakers. A critic's interpretation of a new work might also analyze the work in the light of its artistic innovations and their significance for the art form.

Evaluations of dance performances require critical judgment against a background of presumed expertise. Placing a value on the performance, for instance, covers many factors including the skill of the performers, originality, liveliness or dullness of the performance, authenticity of performance style, overall contribution to the art, social relevance, as well as the critic's taste. Critical evaluations of performances, in the best sense, arise out of and are supported by them.

Their value depends upon the perceptual and interpretive skills of the critic.

All three aspects of criticism have been challenged at one time or another, when judged by criteria of cognitive significance established for knowledge in the sciences. Normally, as Joseph Margolis has pointed out, description implies a stable, well defined object available for inspection, when there is a need to check the facts of any description of the work.¹² A performance does not entirely satisfy these requirements of object stability and availability, because it exists in the full sense only as it is happening. It is possible to check on any disputed parts of a description, however, by consulting the performer and choreographer, and by consulting others who witnessed the performance. The existence of a notation for the performed work offers some hope, but there is not assurance that the notation contains all of the essential parts of the performance, or that the notation was in fact executed precisely according to the written form. Video and film recording of the performance offers additional means of confirming a critical description, but none of these means can capture all of the nuances of performance.

Recently, critics and philosophers of the dance have worried over possible discrepancies in a dance work from performance to performance, and about how discrepancies might affect the problem of knowing a dance. Such discrepancies are indeed a problem for those who insist on treating dance works and their performances as logically discrete symbols whose identity is violated by differences among their various instantiations in different performances. This is especially so in the case of works such as "Swan Lake" with long performance histories resulting in many changes in the choreography. The possibility of changes from one performance to another must be accepted as a "fact of life" which must be taken into account in comparing descriptions of dance performances, as well as for performances of dramatic works and music. Hence, it might not be possible in every case to check all of the details of one performance against another. This situation does not do any particular violence to the cognitive significance of critical descriptions. It simply points up the well-known fact that art works, including performances, are particular, rather than universal entities, which are appreciated for their uniqueness as well as for any common elements.

Interpretations and evaluations of performances also do not fit well the cognitive models of empirical science. Interpretations may vary, and

evaluations are based on "subjective" judgments. Do these considerations rule out criticism as a form of knowledge? Interpretations can be checked against the descriptive facts of a performance, and both critics and their readers are in a position to do this, within the limits noted above. It is sometimes possible, moreover, to have more than one acceptable interpretation of a performance without requiring agreement between the interpretations. Interpretations need not be judged true or false in order to have cognitive significance. They can be interesting, plausible, likely and still retain their cognitive significance.¹³

Similarly, the evaluations of a work, though "subjective," also retain their cognitive significance. They are made against a background of expertise consisting of knowledge in the history and practice of the art, and by a trained observer whose perceptive skills are highly developed by regular practice as a critic. And they are supported by description and interpretation. While critical evaluations cannot be said to be true or false in any simplistic sense, they do advance our knowledge by inviting us to look more closely and to reflect for ourselves on the significance of a work. Frequently, the critic's suggestions lead us to explore on a deeper level our own initial reactions, thereby adding to the factual and interpretive content, or inviting a reappraisal of an initial response. The process of searching and inspection necessary to arrive at such judgments is itself, the essence of cognitive activity.¹⁴ In all of these activities, descriptions, interpretation, and evaluation, criticism expands our knowledge about the dance work. There are nonetheless, limits to the kind of knowledge available in criticism. No one critical account, or the sum of such accounts, is likely to capture fully the qualities or the meaning of an art work whose very enigmatic complexity and richness imply an openness to future description, interpretation, and evaluation. The result of this inquiry into criticism suggests that, indeed, criticism can contribute to our knowledge of a performance. It provides a record of fact and opinion against which to gauge our own understanding of performance.

Yet not all of the important aspects of a performance can be set down in the language of *erkenntnis* of which criticism is one form. It cannot show us the intimate details of the dance as the performer knows it is his own body-mind processes, or as the spectator perceives it in the presence—as a flow of articulated movement in time and space. For an account of these aspects, we must refer to *erlebnis*, or knowledge gained directly from the work itself.

B. Aesthetics

Aesthetics or theory of the arts, which in this case, refers primarily to the philosophical response to the arts, is also a form of *erkenntnis*. It provides the concepts and principles necessary for identifying art works and determining their constituent properties. A theory of dance thus provides a conceptual framework for identifying and appreciating performances, as well as for the development of criticism. Aesthetic theory also acts to improve our thinking about art works by providing a tradition of critical analysis which enables us to examine and improve upon the formulation of existing concepts and principles, and to introduce new theories when the developments in art call for changes in existing ones. Aesthetics differs from criticism in its origin. It is not ordinarily a direct response to a particular work. Rather, aesthetics is a response to performance recognized as an important entity within the domain of art whose existence calls for serious reflection. Aesthetic theory is formulated in abstract language and is lacking in the sensuous immediacy characteristic of direct knowledge of a performance. It is also more abstract in its language than in criticism.

What then is the relation of aesthetics to the cognitive significance of performances? In a certain sense, aesthetics supplies the conceptual foundation for any cognitive significance that a performance might have. Before a choreographer sets out to rate a dance, he must have some idea of what a dance would be. Similarly, a dancer does not perform the dance apart from some prior notion of the nature of performing. Without such knowledge, the dancer would not know where to begin or end, and would have no idea when he had succeeded or failed. Correspondingly, the spectators would not know when a performance is taking place, and when it is successful, without some implicit or explicit understanding of the underlying concepts and principles that establish the nature and objectives of performing. The theory may be implicit or explicit, but it must exist in some form if the activity of performance is to be recognized as a significant activity, one with purpose and meaning.

By this discussion I do not mean to say that the dancers, choreographers, and spectators necessarily think in terms of abstract concepts and principles in the same sense as the philosophers. Aesthetic theory, as a specialized discipline, articulates in its own language the concepts and principles that may be only implicit or informally present in the minds of the practitioners and observers of dance. It is necessary, there-

fore, for those who can, that is, those whose interests and experience encompass an understanding of aesthetic theory and the practice of dance, to bring together the theory and the practice so that the theory may reflect a genuine knowledge of dance. It is equally important, whenever possible, that theory be applied to enrich and clarify the thinking of dance producers and spectators alike.

There is, however, no one theory which covers all of the different purposes that performances might serve, or the means of accomplishing such purposes. Ideas and expectations about the nature and purpose of dance have changed in the minds of practitioners and spectators from the time of the ancient Greeks to the present, and so have the theories of dance changed. From the time of Plato and Aristotle to the mid-nineteenth century, the dominant theory governing the practice of theatre dance was the imitative theory. According to this theory, a dance performance consisted of rhythmic movements existing for the purpose of imitating the feelings and character of human nature, or of imitating aspects of the social order and cosmic movements of the stars and planets. Later, it was decided that dancing itself was sufficiently interesting to be valued for its own intrinsic qualities of movement such as grace, and that it need not imitate anything. Toward the end of the nineteenth century, the expression theory, with its emphasis on the dynamic and feeling properties of dance, introduced yet another change in aesthetic theory with a corresponding shift in thinking about the important properties of a dance performance. As a result, attention was shifted from formal to expressive properties of the dance.

Today it is possible to choose from any number of competing aesthetic theories, old and new. Among the more prominent views presently available on the nature of art works are the following: perceptual theories (Arnheim and Beardsley);¹⁵ symbol theories (Langer and Goodman);¹⁶ and institutional-cultural theories (Danto and Margolis).¹⁷ Arnheim contends, for example, that the most important features of a performance are the dynamic –expressive properties that define the structure of the dance, rendering it intelligible and meaningful to human beings. Beardsley, who also believes that an artwork is a perceptual object, directs our attention to aesthetic properties, which he holds are a function of formal unity and regional qualities of the performance. According to Beardsley, aesthetic properties are objectively present in performance, and available to a spectator by means of perceptual discrimination. In the trad-

ition of Plato and Aristotle, Langer and Goodman argue that a performance functions as a kind of symbol. Both Langer and Goodman introduce new distinctions among symbolic functions to try to accommodate the differences between symbols operating in a language and those common to particular art forms. Goodman, for example, might approach the performance looking for instances of representation, exemplification, or expression as a way of outlining the cognitive significance of a particular performance.¹⁸ Danto would draw attention to the fact that to know the performance as a work of art requires something more than the eye alone can supply; it requires a theory of art that informs the viewer of the conditions under which an object may be considered a work of art. Margolis argues, however, that art works are intentional, culturally emergent objects embedded in a physical medium. According to his theory, a work of art can be known only in relation to the artistic and appreciative traditions of a particular culture.

It is interesting to note that all of the aesthetic theories referred to here draw attention in some way to the cognitive aspects of performance. Symbolic theories point to the different types of cognitive functions that a performance might serve, for example, representation, exemplification, and expression, while perceptual theories draw attention to the kinds of cognitive qualities, for example expressive or formal, that one might expect to encounter in a performance. The institutional and cultural theories each attempt to specify the conditions of knowing a performance as a work of art. Each of these theories, in some sense, directly or indirectly, gives access to knowledge about the performance. They tell us what to look for and give criteria for determining when an event is or is not a performance.

Conclusion

From the distinction drawn here between *erlebnis* and *erkenntnis*, it follows that human potential for learning through the arts encompasses at least two important aspects. *Erlebnis* points to knowledge accessible directly through participation in the artistic activities such as dancing, and to directly perceivable information that is communicated in the presence of art products such as a dance performance. Knowledge in such instances is transmitted in the formally ordered patterns of a system of dance movements that includes kinesthetic and expressive

features as well as abstract time and space configurations. Knowing a work in the sense of *erlebnis* is akin to knowing an object in nature directly through the senses, as opposed to knowing the object through the words that label or describe it. *Erlebnis*, as it occurs independently of *erkenntnis*, because a performer's and a spectator's knowledge are normally informed by prior knowledge about dancing. For the performer, this includes knowledge gained through prior training and experience of dancing. For the spectator it includes previous experiences of doing, observing, or reading about dance.

Responses to art, including criticism, art histories, and aesthetic theory, are represented here as essentially a form of *erkenntnis*. They provide a broader context of understanding the particular art work that is the focus in the discussion of *erlebnis*. These responses help us to see more clearly the structural and stylistic aspects of art works and bring forth their larger significance. The responses in the form of criticism, history, and theory, sometimes help to link the process of making and appreciating art works to other aspects of knowledge including the sciences and the humanities. A critic might point out, for example, the theories of physical and optical space that are assumed in the presentation of ballet on a proscenium stage. Or he might point out a relation of dance to the humanities with a discussion of a particular type of dancing and with reference to a concurrent philosophical theme.

Finally, this analysis affirms the importance of including aesthetic education the primary art-making experiences such as performance, and also the response, including criticism, history of the arts, and aesthetic theory. Performance and responses to performances are not separate realms of knowledge any more than are *erlebnis* and *erkenntnis*; rather, they are complementary to each other and necessary to a comprehensive program in aesthetic education.¹⁹

NOTES

1. Susanne Langer, *Philosophy In a New Key* (Cambridge: Harvard University Press, 1942).
2. Rudolf Arnheim, *Visual Thinking* (Berkeley: University of California Press, 1969). "Visual Thinking in Overview," in Calvin E. Nocine and Dennis F. Fisher (eds.) *Perception and Pictorial Representation* (New York: Praeger, 1979).
3. Nelson Goodman, *Languages of Art* (Indianapolis: Bobbs-Merrill, 1968).
4. Elsewhere I have advanced the thesis that painting styles are languages or language-like systems. See Curtis L. Carter, "Painting and Language: A Pictorial Syntax of Shapes," *Leonardo*, Vol. 9 (1976) pp. 111-118.
5. John Hospers, *Meaning and Truth in the Arts* (Chapel Hill: the University of North Carolina Press, 1946) pp. 233-238.
6. See the following, for instance: Ray L. Birdwhistell, *Introduction to Kinesics* (Philadelphia: University of Pennsylvania Press, 1970); Edward T. Hall, "Rhythm and Body Movement," in *Beyond Culture* (Garden City, N.Y.: 1976) pp. 61-73; Lawrence Halprin, *The R.S.V.P. Cycles* (New York: George Braziller, Inc., 1969); M.G. Scott, "Measurement of Kinesthesia," *Research Quarterly*, Vol. 26 (1955) pp. 324-341; G. Sage, *Introduction to Motor Behavior: A Neurophysiological Approach* (Menlo Park, California: Addison Wesley, 1971); Bryant J. Crotty, *Movement Behavior and Motor Learning* (Philadelphia: Lea & Fabiger, 1973) pp. 89-105; Margaret H. Doubler, *Dance As A Creative Art Experience* (New York: Appleton Century Crofts, 1940).
7. Special thanks are due to ballet dancers Anne Marie DeAngelo and John Meehan and to modern dancers Shirley Ririe and Anna Nassif for sharing their ideas on the performer's knowledge of a dance.
8. See M.G. Scott, "Measurement of Kinesthesia," *Research Quarterly*, Vol. 26 (1955) pp. 324-341; G. Sage, *Introduction to Motor Behavior: A Neurophysical Approach* (Menlo Park, California: Addison Wesley, 1971).
9. Anne Marie DeAngelo, principal dancer, Joffrey Ballet, Interview, New York, November, 1980.
10. Maxine Sheets-Johnstone, "Thinking In Movement", *Journal of Aesthetics and Art Criticism* (1981) Summer, Vol. 39, No. 4, pp. 398-407. See especially pp.400, 404. See also Maurice Merleau-Ponty, *Phenomenology of Perception*, tr. Colin Smith (New York, Humanities Press, 1962) p. 182, and "Eye and Mind," tr. Carleton Dallery in James M. Edie (ed.) *The Primacy of Perception* (Evanston: Northwestern University Press, 1964) p. 178.
11. Barbara Morgan, *Barbara Morgan* (Hastings-on-Hudson: Morgan and Morgan, 1972) p. 21.
12. Joseph Margolis, *Art and Philosophy: Conceptual Issues In Aesthetics* (Atlantic Highlands, New Jersey: Humanities Press, 1980) p. 111.
13. *Ibid.*, p. 120.
14. *Op. cit.*, Goodman, *Languages of Art*; see pp. 242, 258, for a discussion of the role of searching and exploring as part of aesthetic cognition.
15. Rudolf Arnheim, *Art and Visual Perception* (Berkeley and Los Angeles: Univer-

sity of California Press, 1974); Monroe Beardsley, *Aesthetics* (New York: Harcourt Brace, 1958).

16. *Op. cit.*, Langer, *Philosophy in a New Key*; *op. cit.*, Goodman, *Languages of Art*.

17. Arthur Danto, "The Art World," *Journal of Philosophy*, Vol. 61; *op. cit.*, Margolis, *Art and Philosophy*.

18. Exemplification is possession plus reference...exemplification is the relation between a sample and what it refers to," according to Goodman, *op.cit.* p. 58. A tailor's swatch, for example, exemplifies texture, color, weave, and thickness. The richness of reference, offered by exemplification, including its ability to refer to abstract notions, makes it an especially useful concept for characterizing references made by artworks.

19. Another version of this paper appeared in *Art Education* (March 1983).